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2004 FORD Galaxy OEM Service and Repair Workshop Manual

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ACC (adaptive cruise control) should be disabled using the menu options when a snow plow or similar equipment is installed.

G1 INSPECT THE FRONT BUMPER FOR DAMAGE

- With the vehicle in NEUTRAL, position it on a hoist.
  REFER to: Jacking and Lifting - Overview(100-02 Jacking and Lifting, Description and Operation).
- Inspect for damage on the front and back of the front bumper.

Is the front bumper or front bumper trim panel damaged?

Yes	REPAIR or INSTALL a new front bumper as necessary. If installing a new front bumper, REFER to: Front Bumper (501-19 Bumpers, Removal and Installation). REFER to: Front Bumper - Raptor (501-19 Bumpers, Removal and Installation).
No	GO to G2

G2 INSPECT THE CCM (CRUISE CONTROL MODULE) AND FRONT BUMPER FOR DEBRIS, MOISTURE, SNOW OR ICE

- Inspect for debris, moisture, snow or ice on the front and back of the front bumper and sensor.

Is the CCM (cruise control module) obstructed or blocked?

Yes	CLEAN the front bumper and radar sensor portion as necessary.
No	GO to G3

G3 INSPECT THE CCM (CRUISE CONTROL MODULE) BRACKET FOR CORRECT MOUNTING

- Inspect the CCM (cruise control module) bracket for a loose connection or damage at the connection points.

Is the CCM (cruise control module) bracket loose, bent or damaged?

Yes	Correctly INSTALL the bracket or INSTALL new grommets as necessary. ALIGN the sensor. REFER to: Cruise Control Radar Alignment

- Disconnect and inspect the CCM (cruise control module) connectors.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the CCM (cruise control module) connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new CCM (cruise control module) . REFER to: Cruise Control Radar Alignment (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, General Procedures).

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST H : C1A67:98

Refer to Wiring Diagrams Cell 31for schematic and connector information.

Normal Operation and Fault Conditions REFER to: Cruise Control - Vehicles With: Adaptive Cruise Control With Lane Centering - System Operation and Component Description
(419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).
REFER to: Cruise Control - Vehicles With: Active Drive Assist/Intelligent Adaptive Cruise Control - System Operation and Component Description
(419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
CCM (cruise control	Forward Looking Sensor: Component	Sets when the CCM (cruise control module) detects a temperature above its calibrated range. ACC (adaptive cruise control) is

- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the CCM (cruise control module) connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new CCM (cruise control module) . REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

PINPOINT TEST I : U2008:08

Refer to Wiring Diagrams Cell 31for schematic and connector information.

Normal Operation and Fault Conditions REFER to: Cruise Control - Vehicles With: Active Drive Assist/Intelligent Adaptive Cruise Control - System Operation and Component Description
(419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Description and Operation).

DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
CCM (cruise control module) U2008:08	Sensor Cluster: Bus Signal/Message Failures	This continuous memory and on-demand DTC (diagnostic trouble code) sets in the CCM (cruise control module) when communication messages from the IPMA (image processing module A) on the private CAN (controller area network) are missing.

C1897-2	V	Ground
C1897-3	V	Ground

Is any voltage present?

Yes	REPAIR the circuit in question.

No	GO to I3

I3 CHECK THE PRIVATE CAN CIRCUITS FOR A SHORT TO GROUND

- Ignition OFF.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1897-2	Ω	Ground
C1897-3	Ω	Ground

Are the resistances greater than 10,000 ohms?

Yes	GO to I4

No	REPAIR the circuit in question.

I4 CHECK THE PRIVATE CAN CIRCUITS FOR A SHORT TOGETHER

- Ignition OFF.
- Disconnect and inspect all CCM (cruise control module) connectors.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the CCM (cruise control module) connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW service article instructions. If no service articles address this concern, INSTALL a new CCM (cruise control module) . REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation). If the concern is still present, GO to I7

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

I7 CHECK FOR CORRECT IPMA (IMAGE PROCESSING MODULE A) OPERATION

- Ignition OFF.
- Disconnect and inspect all IPMA (image processing module A) connectors.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the IPMA (image processing module A) connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or

- Wait 10 seconds.
- Using the diagnostic scan tool, perform the CCM (cruise control module) self-test.

Is DTC (diagnostic trouble code) U2100:00 or U2300:55 still present?

Yes	GO to J2

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been falsely set by the CCM (cruise control module) causing the signal to momentarily stop and set the DTC (diagnostic trouble code) .

J2 INSTALL CCM (CRUISE CONTROL MODULE) PMI (PROGRAMMABLE MODULE INSTALLATION)

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs).
- Install CCM (cruise control module) As-Built data from PTS (Professional Technician System) following scan tool instructions.

Is DTC (diagnostic trouble code) U2100:00 or U2300:55 still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new CCM (cruise control module) . REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

No	The system is operating correctly at this time.

PINPOINT TEST K : U3000:41, U3000:42, U3000:44 OR U3000:49

Refer to Wiring Diagrams Cell 31for schematic and connector information.

Normal Operation and Fault Conditions When the CCM (cruise control module) receives an ignition wake up signal, the CCM (cruise control module) preforms a state of health check. If checksum values, internal memory, internal electronic failure or a RAM (random access memory) failure occurs, then one or more of the following codes may set. **DTC Fault Trigger Conditions**

- Ignition ON.
- Using a diagnostic scan tool, CLEAR the CCM (cruise control module) DTCs.
- Wait 10 seconds.
- Using a diagnostic scan tool, perform the CCM (cruise control module) self-test.

Is DTC (diagnostic trouble code) U3000:41, U3000:42, U3000:44 or U3000:49 recorded?

Yes	GO to K2

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been set due to an intermittent fault condition.

K2 CHECK FOR CORRECT CCM (CRUISE CONTROL MODULE) OPERATION

- Ignition OFF.
- Disconnect and inspect the CCM (cruise control module) connector.
- Repair:
  - corrosion (install new connector or terminals - clean module pins)
  - damaged or bent pins - install new terminals/pins
  - pushed-out pins - install new pins as necessary
- Reconnect the CCM (cruise control module) connector. Make sure it seats and latches correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service article address this concern, INSTALL a new CCM (cruise control module) . REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

No	The system is operating correctly at this time. The DTC (diagnostic trouble code) may have been falsely set by the CCM (cruise control module) causing the signal to momentarily stop and set the DTC (diagnostic trouble code) .

L2 INSTALL CCM (CRUISE CONTROL MODULE) PMI (PROGRAMMABLE MODULE INSTALLATION)

- Using a diagnostic scan tool, clear the Diagnostic Trouble Codes (DTCs).
- Install CCM (cruise control module) As-Built data from PTS (Professional Technician System) following scan tool instructions.

Is DTC (diagnostic trouble code) U3002:62 still present?

Yes	CHECK OASIS (Online Automotive Service Information System) for any applicable service articles: TSB (Technical Service Bulletin) , GSB (General Service Bulletin) , SSM (special service message) or FSA (Field Service Action) . If a service article exists for this concern, DISCONTINUE this test and FOLLOW the service article instructions. If no service articles address this concern, INSTALL a new CCM (cruise control module) . REFER to: Cruise Control Module (CCM) (419-03B Cruise Control - Vehicles With: Adaptive Cruise Control, Removal and Installation).

No	The system is operating correctly at this time.

PINPOINT TEST M : U3003:16

Refer to Wiring Diagrams Cell 31for schematic and connector information.

Normal Operation and Fault Conditions When the ignition is on, the CCM (cruise control module) receives ignition voltage from the IPMA (image processing module A) . The IPMA (image processing module A) also provides a path to ground from the CCM (cruise control module) . **DTC Fault Trigger Conditions**

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
CCM (cruise control module) U3003:16	Battery Voltage: Circuit Voltage Below Threshold	Set by the CCM (cruise control module) as a continuous memory and on-demand DTC (diagnostic trouble code) if the CCM (cruise control module) detects low battery voltage below 9.0 volts for more than 100 ms.

- Using a diagnostic scan tool, perform the PCM (powertrain control module) self-test.

Are any charging system DTCs present?

Yes	DIAGNOSE and REPAIR those DTCs first. Refer to the appropriate section in Group 414for the procedure.

No	GO to M3

M3 CHECK THE BATTERY CONDITION AND STATE OF CHARGE

- Check the battery condition and verify the battery is fully charged.
  REFER to: Battery(414-01 Battery, Mounting and Cables, Diagnosis and Testing).

Is the battery OK and fully charged?

Yes	GO to M4

No	INSTALL a new battery. REFER to: Battery (414-01 Battery, Mounting and Cables, Removal and Installation).

M4 CHECK THE CCM (CRUISE CONTROL MODULE) VOLTAGE SUPPLY

- Ignition OFF.
- Disconnect CCM (cruise control module) C1897 .
- Ignition ON.
- Measure:

Positive Lead	Measurement / Action	Negative Lead
C1897-1	V⎓	Ground

Is the voltage greater than 11.0 volts?